



Dubai Health Insurance
Financial and Economic Activities - 2014
Overview and Comparison

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EXECUTIVE SUMMARY

1

1.1 This report

This report is the first of its kind to show the utilization of the healthcare system in Dubai for the claimed activities submitted through the eClaimLink system, as well as to compare the variations in medical and hospital prices for these activities and other selected countries. Comparative data for these countries is collected and compiled to produce an annual report by the International Federation of Health Plans (iFHP). We used in this report the latest available iFHP data, which is the 2013 Comparative Price Report.

This comparison is needed in light of **a)** the implementation of the mandatory health insurance for Dubai, which is in its second phase, and **b)** the pricing regulation project that DHA is conducting to ensure a sustainable healthcare system. Both factors contributed to the production of this report. The information in this report is aimed to help all parties to carry out planning for the implementation and development of the health insurance scheme, based on the evidence collected by the eClaimLink system.

About Dubai Data

Data for Dubai is extracted from the eClaimLink database that stores all health insurance claims for Dubai policy holders. Dubai Health Authority (DHA) oversees all operations relating to the eClaimLink system, and ensures that rules and regulations are adhered to for full compliance and that all health insurance transactions are reported through the system.

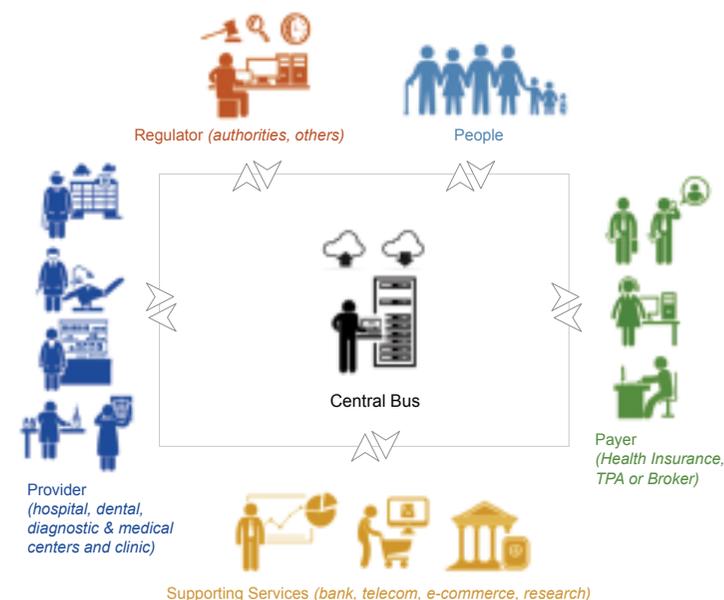


Figure 1. The overall structure of the EclaimLink system

Other Countries

Prices for each country are submitted by participating federation member plans, and are drawn from public or commercial sectors as follows¹:

- Prices for the United States are calculated from a database with over 100 million claims that reflect prices negotiated and paid between thousands of providers and almost a hundred commercial health plans
- Prices for Australia, Argentina, and Spain are from the private sector, with data provided by one private health plan in each country
- Prices for Canada and Netherlands are from the public sector, with data provided by one private health plan in each country

1. Source: www.iFHP.com, accessed May, 2015

- Medical procedure prices for Switzerland, England and New Zealand are from the private sector; prescription drug prices are based on public sector prices. Prices are provided by one private health plan in each country.

More information on IFHP can be found in www.ifhp.com.

In addition, this report uses the National Health Accounts Data from these countries, using OECD health statistics data for the most recent year available².

1.2 Methodology

The data for Dubai pricing was extracted from eClaimLink transactions for the year 2014 using the same coding standards used to collect the data for the IFHP’s countries to ensure that the data is comparable and consistent. For example, see Table 1 below.

Table 1. The CPT codes used to extract the data for the prices of CT Scan Abdomen from the submitted claims in eClaimLink using the following coding provided by IFHP.

Procedure	CPT Code	CPT Code Description
CT Scan Abdomen	74150	Computed tomography, abdomen; without contrast material
	74160	Computed tomography, abdomen; with contrast material(s)
	74170	Computed tomography, abdomen; without contrast material, followed by contrast material(s) and further sections
	74175	Computed tomographic angiography, abdomen, without contrast material(s), followed by contrast material(s) and further sections, including image post-processing
	75635	Computed tomographic angiography, abdominal aorta and bilateral iliofemoral lower extremity runoff, radiological supervision and interpretation, without contrast material(s), followed by contrast material(s) and further sections, including image post-proc

Table 1 below shows the CPT codes used to extract the data for the prices of CT Scan Abdomen from the submitted claims in EClaim Link using the following coding provided to us by IFHP.

In addition, the macro data from eClaimLink was used to compare Dubai to the National Health Accounts reports of these countries.

The prices for the drug comparisons used in this report, Humira 40mg/0.8ml 30 day supply, Nexium 30 capsules 40mg 30 day supply and Celebrex 100 tablets 200mg, were taken from the Dubai Drug Code (DDC) 29th April 2015 release.

1.3 Limitations

Despite the granularity and comprehensive data that is found in EclaimLink, and as with any study and analysis, few limitations must exist, and should be mentioned.

First, the difference in the reporting years. Dubai eClaimLink data is from 2014, while the iFHP data is from 2013. Second, comparisons across different countries are complicated by differences in sectors, fee schedules, and systems. A single plan’s prices may not be representative of prices paid by other plans in that market³.

Nevertheless, both limitations have minimal effect on the quality of the data and the output of this report. As for the difference in years, it is only one year difference, and prices in either economy do not fluctuate significantly every year. As for the variations across countries, this exercise was not designed to provide an exact and complete data set, but rather to measure the price variations between Dubai and other countries.

2. Source: data extracted from OECD.stat on May, 2015

3. Source: www.ifhp.com, accessed May, 2015

OVERALL DUBAI HEALTH INSURANCE CLAIMS

Since inception in June 2012, the health insurance claims submitted through eClaimLink has increased exponentially, which indicates a successful uptake by all parties involved. Figure 1 below shows the biannual volume of transactions as well as the total amount claimed.

The figure shows that the increase in the number of claims and their value starting to level by 2014. This compliance of the health insurance and healthcare providers market submitting claims through the system

can be attributed to the regulatory development, in particular the health insurance Law and its supporting regulations by DHA.

The second biannual figures indicate that the total value of the claims reached 2.5 Billion AED in the last six months of 2014, which represents a total yearly claims value of 5 Million claims. As the number of insured population is expected to rise till the universal health coverage by mid-2016, the claimed amount and volume will continue to increase.

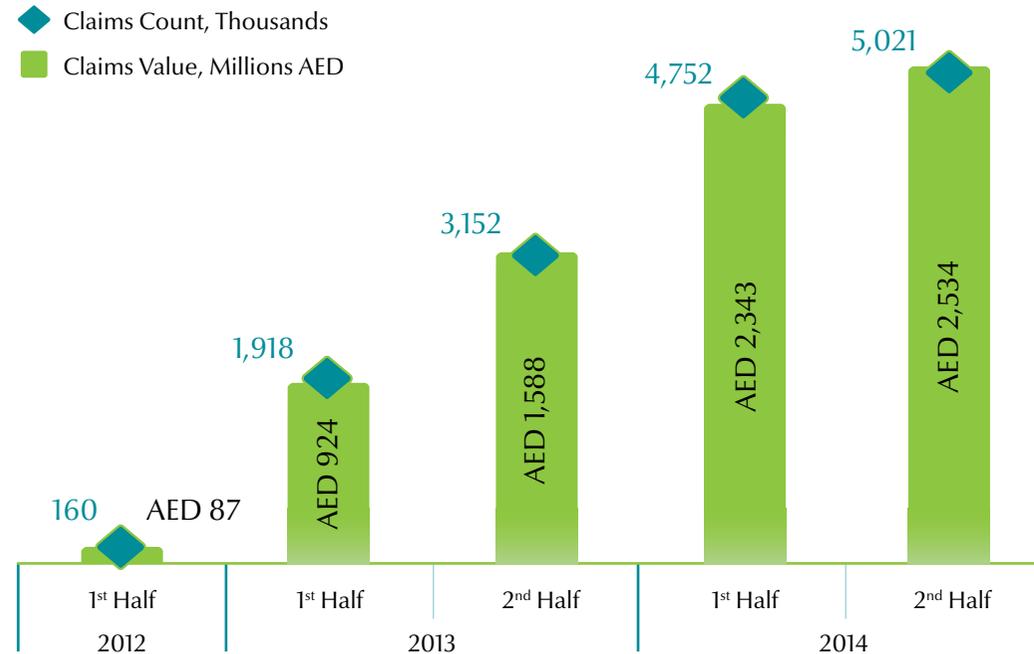
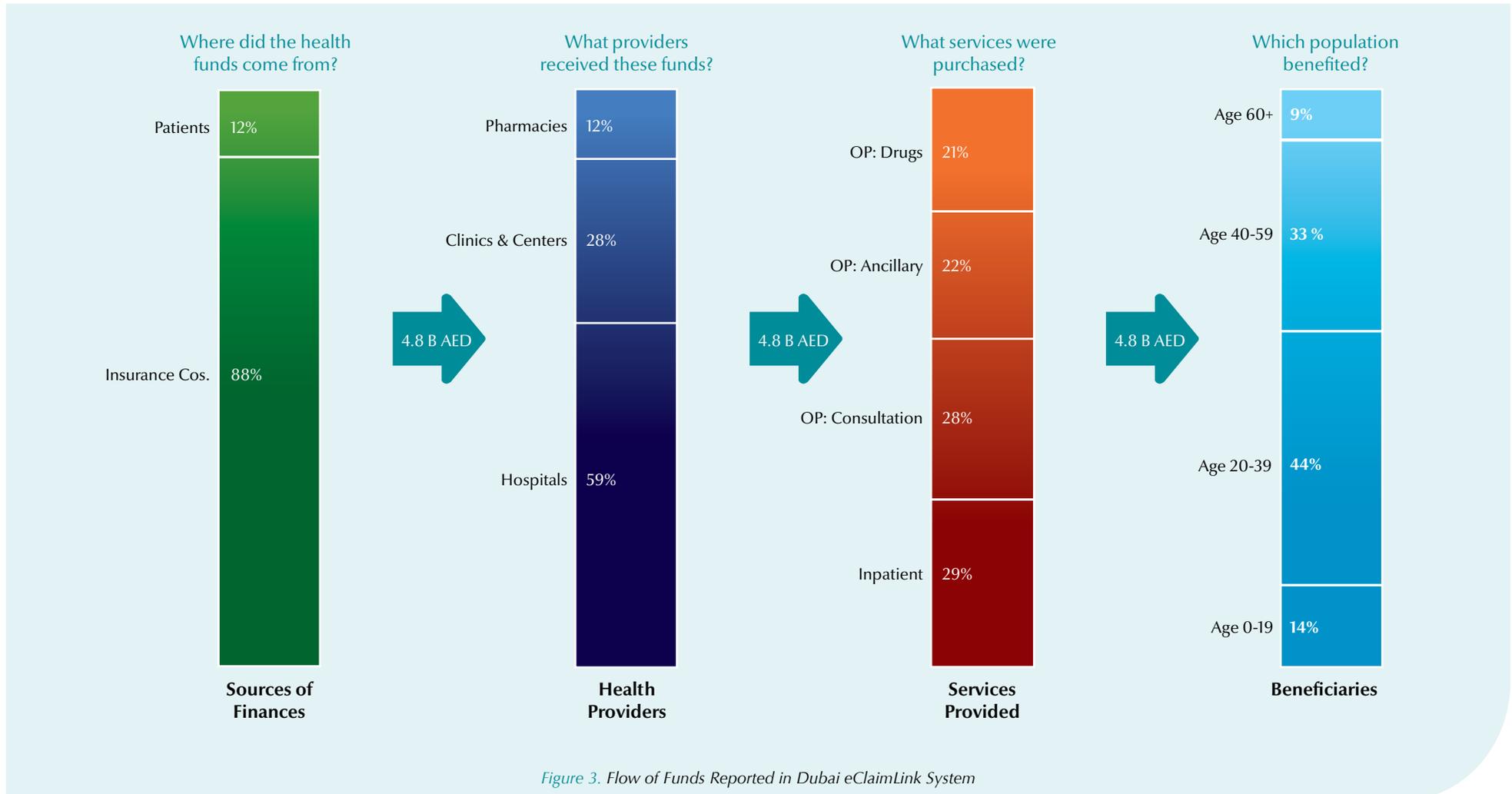


Figure 2. Biannual claims submitted in Dubai via EClaimLink system

In 2014, which is the focus of this report, the total health insurance expenditure reported in eClaimLink was 4.8 Billion AED (1.3 Billion US Dollars). Figure 1 shows the flow of insurance funds, from sources, to providers, to services delivered, to beneficiaries.

This report highlights the results the last two columns of Figure 1:

1. *What services were delivered?*
2. *Which population benefited from these services?*



2.1 Services Delivered

The figure below shows the results of the services delivered in 2014.

Compared to the 29% inpatient care services in Dubai, the average inpatient services delivered in the other countries is constituted 43%. On the other hand, compared to the 71% outpatient average in Dubai, these services constituted 47% in the comparative countries.

In the figure below, it is evident that for every 100\$ spent on outpatient services in Dubai, 40% were spent on consultations and services. The average spent for these services in the comparative countries is 57%.

In contrast, the ancillary services, composed of radiology and pathology, constituted 31% in Dubai compared to 8% in other countries. Drugs constituted 29% in Dubai compared to 34% in the comparative countries.

Figure 4. Percent of total claimed amounts by type of services delivered

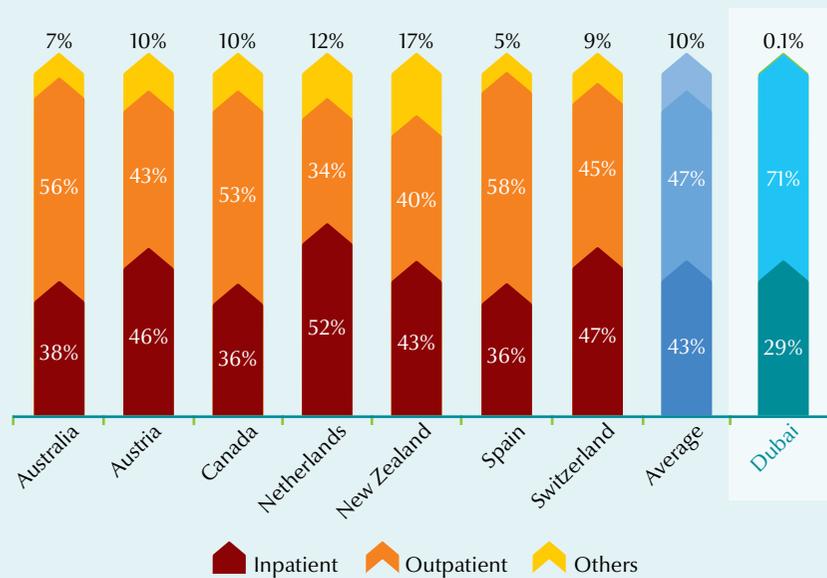
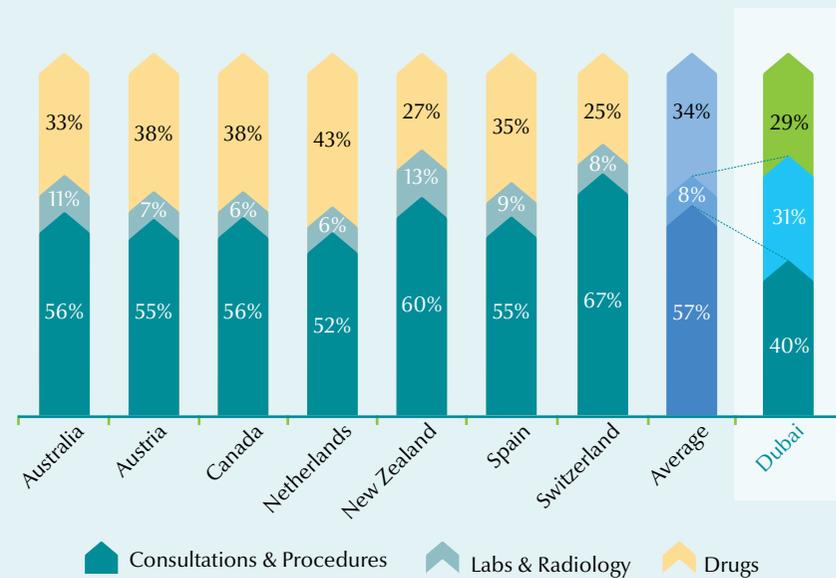


Figure 5. Percent distribution of expenditure on outpatient care

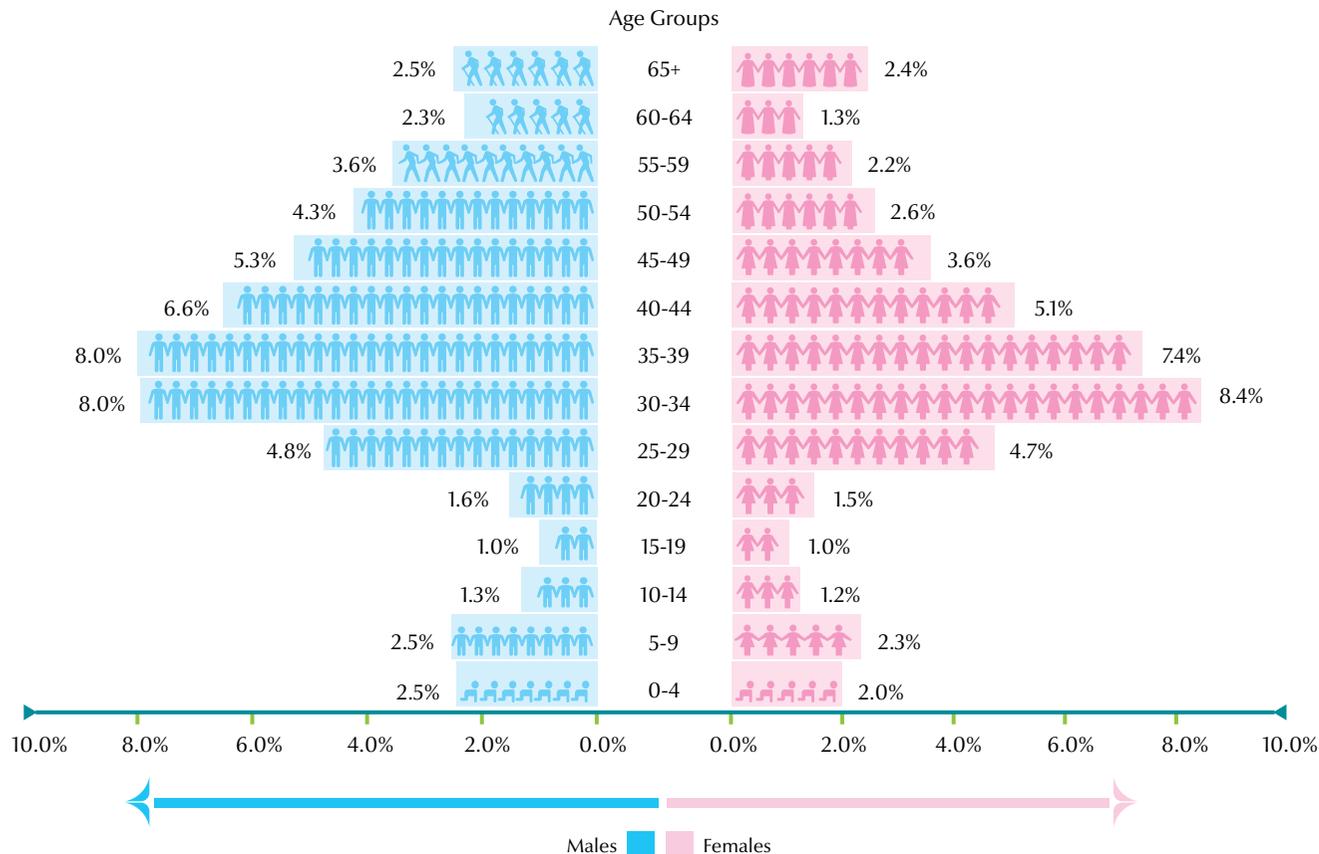


2.2 Beneficiaries:

Figure 5 below shows the percentage of the health insurance expenditure by age and gender. The health expenditures were balanced between males and females (symmetrical pyramid). The pyramid is disproportionate to the actual population of Dubai, which illustrates the population bulge at the working age group of males.

These findings are consistent with the findings from HASD, which further emphasizes the health utilization equity in Dubai: the lower share of health expenditure for the age working male groups are attributable to biological variations, outside the individual concerned, the insurance companies, or the government.

Figure 6. Percentage health insurance net expenditures by age group and gender, 2014



Insurance companies were mandated to load the members details in eClaimLink, such as age and gender, by mid of 2014. Hence, the data extracted by age and gender constituted only 31% of the overall expenditure for 2014. We found no statistical evidence, using T-test of difference in means for unpaired and unequal variance, that the average expenditure between the members reported age and gender information and the members with unreported age and gender information to be different at 95% confidence level. The next eClaimLink reports will include a predictive modeling to estimate the age and gender of the unreported members' details, in order to measure the expenditure by provider and services delivered.

PRICE COMPARISON WITH OTHER COUNTRIES

3

Diagnostics

The diagnoses prices data for these countries is used to illustrate the difference in prices between Dubai and these countries. Services in this category include all specified procedures performed in a physician's office, hospital outpatient department, or other outpatient facility; services provided for hospital inpatients are excluded. The prices are defined as total amount payable for the scanning or imaging service, including both the professional and technical components. All specified services related to a single patient, provided on a single day, and covering a single specified body area are combined into one unit⁴.

1. Angiogram

Computed tomographic angiography applied to any body part, with or without contrast and further sections, including image post-processing.

2. CT abdomen

Computed tomography or computed tomographic angiography applied to abdomen, or computed tomographic angiography, abdominal aorta and bilateral iliofemoral lower extremity runoff; with or without contrast material (or without contrast material, followed by contrast material(s) and further sections).

3. MRI

Magnetic resonance (e.g. proton) imaging, applied to temporomandibular joints, face, neck, orbits, brain, brain stem, chest, spinal canal, pelvis, upper extremity, upper extremity joint, lower extremity, lower extremity joint, abdomen, or breast, with or without contrast material(s) and further sections; unilateral or bilateral.



Hospital and Physician Prices

Hospital cost data is used to illustrate the prices in Dubai for hospital cost per day overall. For this category, each inpatient hospital admission primarily associated with the specified procedure is counted as one unit, and each outpatient hospital service for the specified procedure is counted as one unit. The price should include all physicians, other care provider, hospital or facility, and other related payments. It also includes the following procedures:

1. Appendectomy

Appendectomy with/without complicated principal diagnosis with/without complications and comorbidities or major complications and comorbidities.

2. Cataract surgery

Intraocular procedures with or without complications and comorbidities or major complications and comorbidities.

3. Normal Delivery

Vaginal delivery by physicians and midwives with or without complicating diagnoses; vaginal delivery with sterilization and/or dilatation and curettage ("D&C"); or with O.R. procedure except sterilization and/or D&C. This includes anesthesiology costs but excludes pre-natal and postpartum care. Care of the newborn is also excluded.

4. C-Section

Cesarean section delivery with or without complications and comorbidities or major complications and comorbidities. This includes anesthesiology costs and excludes pre-natal and postpartum care. Care of the newborn is also excluded.

5. Knee replacement

Arthroplasty, patella, knee, spacer, tibial and femoral condyles prosthetic replacement; or revision and removal of previous prosthesis. Multiple knee replacement procedures reported on the same date for a single patient are counted as one unit of service.

6. Hip replacement

Revision of hip or knee replacement, with/without complications and comorbidities or major complications and comorbidities; acetabular, acetabular liner, femoral, and/or femoral head components. Multiple hip replacement procedures reported on the same date for a single patient are counted as one unit of service.

7. Bypass surgery

Coronary bypass (e.g., bypass anastomosis for heart revascularization) with or without percutaneous transluminal coronary angioplasty (PTCA), with or without cardiac catheterization (e.g., cardiac catheterization, angiocardiography, coronary arteriography, negative contrast cardiac roentgenography), with or without major complications and comorbidities.

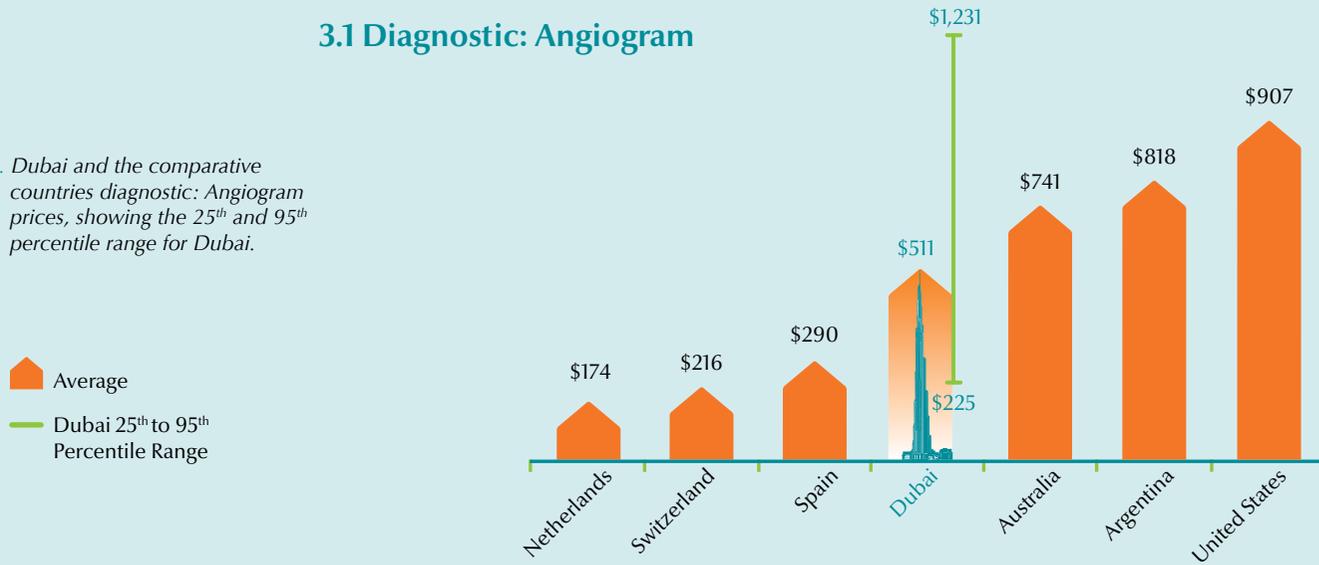
8. Angioplasty

Procedures include percutaneous cardiovascular procedure with/without drug-eluting stent with/without major complications and comorbidities, as well as coronary bypass (e.g., bypass anastomosis for heart revascularization) with percutaneous transluminal coronary angioplasty or percutaneous valvuloplasty with/without complications and comorbidities or major complications and comorbidities.



3.1 Diagnostic: Angiogram

Figure 7. Dubai and the comparative countries diagnostic: Angiogram prices, showing the 25th and 95th percentile range for Dubai.



3.2 Diagnostic: CT Abdomen

Figure 8. Dubai and the comparative countries diagnostic: CT Abdomen prices, showing the 25th and 95th percentile range for Dubai.



3.3 Diagnostic: MRI

Figure 9. Dubai and the comparative countries diagnostic: MRI prices, showing the 25th and 95th percentile range for Dubai

 Average
 Dubai 25th to 95th Percentile Range



3.4 Hospital Cost per Day

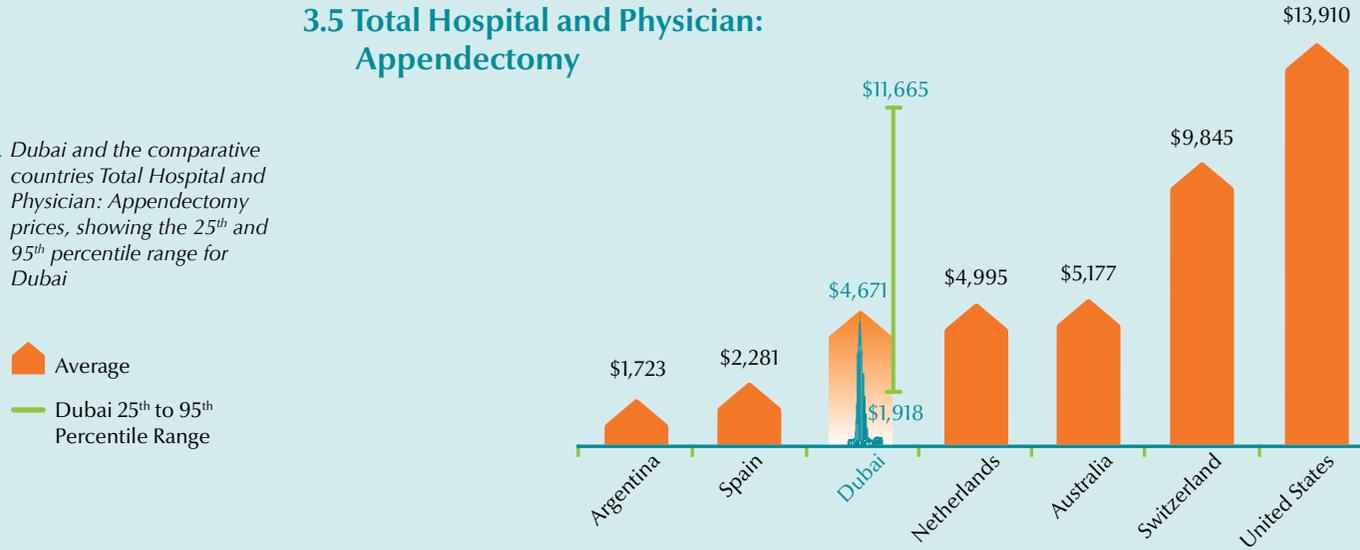
Figure 10. Dubai and the comparative countries Hospital Cost per Day prices, showing the 25th and 95th percentile range for Dubai. Hospital day is computed as 24 hours from the time of the admission

 Average
 Dubai 25th to 95th Percentile Range



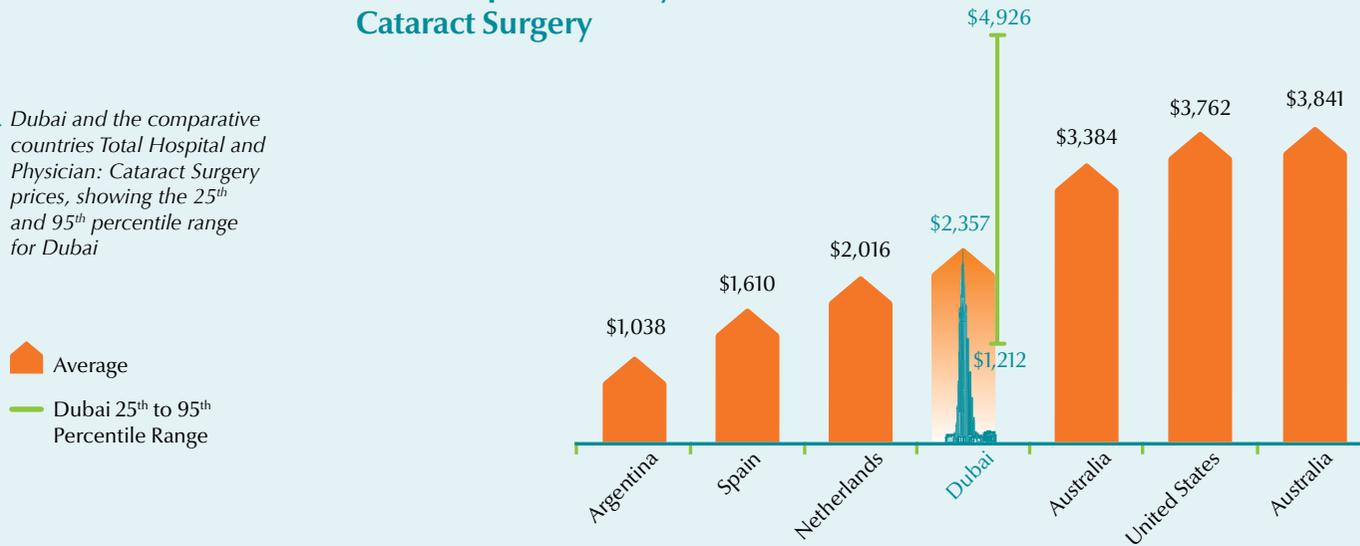
3.5 Total Hospital and Physician: Appendectomy

Figure 11. Dubai and the comparative countries Total Hospital and Physician: Appendectomy prices, showing the 25th and 95th percentile range for Dubai



3.6 Total Hospital and Physician: Cataract Surgery

Figure 12. Dubai and the comparative countries Total Hospital and Physician: Cataract Surgery prices, showing the 25th and 95th percentile range for Dubai



3.7 Total Hospital and Physician: Normal Delivery

Figure 13. Dubai and the comparative countries Total Hospital and Physician: Normal Delivery prices, showing the 25th and 95th percentile range for Dubai

 Average
 Dubai 25th to 95th Percentile Range



3.8 Total Hospital and Physician: C-Section

Figure 14. Dubai and the comparative countries Total Hospital and Physician: C-Section prices, showing the 25th and 95th percentile range for Dubai

 Average
 Dubai 25th to 95th Percentile Range



3.9 Total Hospital and Physician: Knee Replacement

Figure 15. Dubai and the comparative countries Total Hospital and Physician: Knee Replacement prices, showing the 25th and 95th percentile range for Dubai

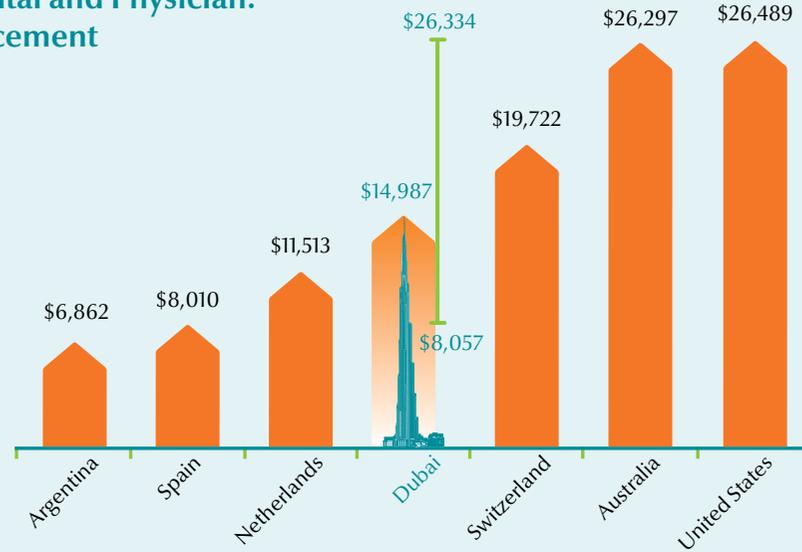
 Average
 Dubai 25th to 95th Percentile Range



3.10 Total Hospital and Physician: Hip Replacement

Figure 16. Dubai and the comparative countries Total Hospital and Physician: Hip Replacement prices showing the 25th and 95th percentile range for Dubai

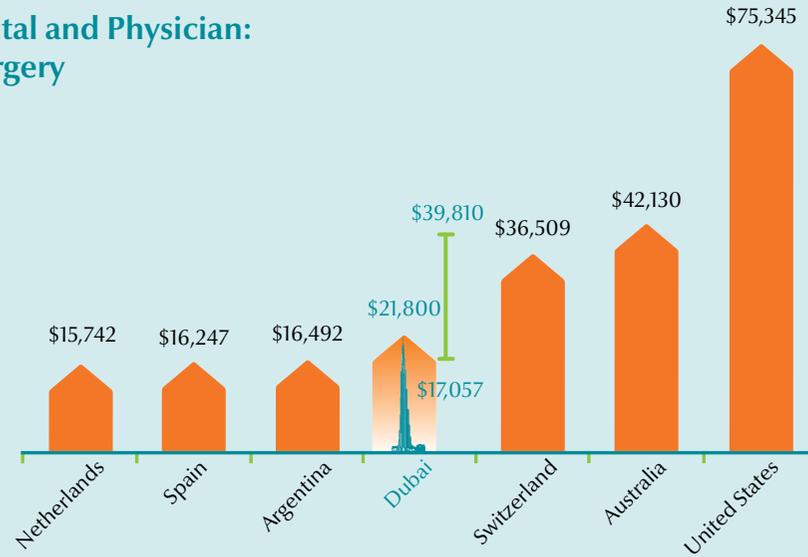
 Average
 Dubai 25th to 95th Percentile Range



3.11 Total Hospital and Physician: Bypass Surgery

Figure 17. Dubai and the comparative countries Total Hospital and Physician: Bypass Surgery prices, showing the 25th and 95th percentile range for Dubai

 Average
 Dubai 25th to 95th Percentile Range



3.12 Total Hospital and Physician: Angioplasty

Figure 18. Dubai and the comparative countries Total Hospital and Physician: Angioplast prices, showing the 25th and 95th percentile range for Dubai

 Average
 Dubai 25th to 95th Percentile Range



